INDEX OF VOLUME XIX

Akasaki, T. *On a kind of homotopy manifold*, 361
Alexandrov, A. D. *A contribution to chronogeometry*, 1119
Appel, K. I. and Parker, E. T. *On unsolvable groups of degree* $p = 4q + 1$, p *and* q *primes*, 583
Aubert, K. E. *Un théorème sur l'arithmétique des groupes ordonnées*, 24

Bachmann, F. *Der Höhensatz in der Geometrie involutorischer Gruppenelemente*, 895
Baer, Reinhold. *Soluble artinian groups*, 904
Barback, Joseph. *Double series of isols*, 1
Barbeau, Edward J. *Subordinate and pseudo-subordinate semi-algebras*, 212
Barrar, Richard B. *Proof of the fixed point theorems of Poincaré and Birkhoff*, 333
Böhm, J. *Zur Verallgemeinerung der Neperschen Regel in r-dimensionalen Riemannschen Räumen konstanter Krümmung*, 1129
Bollobás, Béla. *An extremal problem for polygons inscribed in a convex curve*, 523
Borges, Carlos J. R. *On extensions of topologies*, 474
Botta, E. P. *Linear transformations on matrices: The invariance of a class of general matrix functions*, 281
Bottema, O. *The inversive distance between two circles*, 1149
Boyd, D. W. *The Hilbert transform on rearrangement-invariant spaces*, 599
Boyd, David W. *A class of operators on the Lorentz space* $M(\phi)$, 839
Brauer, Fred. *Green's functions for singular ordinary differential operators*, 571
Brickell, F. *Differentiable manifolds with an area measure*, 540
Brickman, L. and Fillmore, P. A. *The invariant subspace lattice of a linear transformation*, 810
Brockwell, P. J. *On the number of associative triples in an algebra of n elements*, 842
Brown, William G. *On the non-existence of a type of regular graphs of girth 5*, 644
Bullen, P. S. *A general Perron integral, II*, 457
Buschman, R. G. and Wunderlich, M. C. *Sieve-generated sequences with translated intervals*, 559

Caradus, S. R. *On meromorphic operators, I*, 723
——— *On meromorphic operators, II*, 737
Csörgö, Miklós. *A new proof of some results of Rényi and the asymptotic distribution of the range of his Kolmogorov–Smirnov type random variables*, 550

Darsow, William F. *Signal metrics*, 28
Dawson, D. A. *See* Sankoff and Dawson
DeMarr, Ralph. *On partially ordering operator algebras*, 636
Dembowski, Peter. *Collineation groups containing perspectivities*, 924
Dickson, S. E. *A note on hypernilpotent radical properties for associative rings*, 447
Dorroh, J. R. *Semi-groups of maps in a locally compact space*, 688
Duff, G. F. D. *Differences, derivatives, and decreasing rearrangements*, 1153
Du Val, Patrick. *Rational surfaces with exceptional unodes*, 938
Dyer, Micheal N. *Two term conditions in* π *exact couples*, 1263

Edge, W. L. *A new look at the Kummer surface*, 952
Ellis, H. W. and Jeffery, R. L. *Derivatives and integrals with respect to a base function of generalized bounded variation*, 225
Ellis, Homer G. *Solvability of ordinary differential equations near singular points: An analytic case*, 1303
Erdös, P. *On some applications of graph theory to geometry*, 968

Fejes Tóth, L. and Heppes, A. *A variant of the problem of the thirteen spheres*, 1092
Fillmore, P. A. *See* Brickman and Fillmore

Finlayson, Henry C. *New approximations for Wiener integrals, with error estimates*, 58
Firey, Wm. J. *Generalized convex bodies of revolution*, 972
Forder, H. G. *On order in a plane*, 997
Forelli, Frank. *Extreme points in $H^1(R)$*, 312
Fujiwara, Tsuyoshi. *Permutability of semilattice congruences on lattices*, 370

Garner, Cyril W. L. *Regular skew polyhedra in hyperbolic three-space*, 1179
Ginzburg, A. *Representation of groups by generalized normal multiplication tables*, 774
Goethals, J. M. and Seidel, J. J. *Orthogonal matrices with zero diagonal*, 1001
Graham, R. L. *On partitions of an equilateral triangle*, 394
Griffin, Malcolm, *Some results on v-multiplication rings*, 710
Gulick, S. L., Liu, T. S., and van Rooij, A. C. M. *Group algebra modules. I*, 133
——— *Group algebra modules. II*, 151

Haimo, Franklin. *Extensions of endomorphisms from the higher centres*, 1250
Hall, C. A. *Intrinsic functions on semi-simple algebras*, 590
Harary, Frank and Plummer, Michael D. *On indecomposable graphs*, 800
Hartman, Philip. *On homotopic harmonic maps*, 673
Heerema, N. *Inertial isomorphisms of v-rings*, 529
Heppes, A. *See* Fejes Tóth and Heppes
Heppes, Aladár. *On the number of spheres which can hide a given sphere*, 413
Hobby, C. R. *Nearly regular p-groups*, 520
Howard, H. C. *Oscillation criteria for matrix differential equations*, 184

Ingram, W. T. *Concerning non-planar circle-like continua*, 242

Janko, Zvonimir. *A characterization of the finite simple group* $PSp_4(3)$, 872
Jeffery, R. L. *See* Ellis and Jeffery
Jones, William B. *Direct products of normed linear spaces*, 769
Jordan, James H. *Covering classes of residues*, 514

Klarner, David A. *Cell growth problems*, 851

Labute, John P. *Classification of Demushkin groups*, 106
Larson, Richard G. *Cocommutative Hopf algebras*, 350
Leech, John. *Notes on sphere packings*, 251
Libera, Richard J. *Univalent α-spiral functions*, 449
Liu, T. S. *See* Gulick, Liu, and van Rooij
Luh, Jiang. *On the commutativity of J-rings*, 1289
Luther, Norman Y. *Unique extension and product measures*, 757
Luxemberg, W. A. J. and Masterson, J. J. *An extension of the concept of the order dual of a Riesz space*, 488

Macbeath, A. M. *The classification of non-euclidean plane crystallographic groups*, 1192
Mack, John. *Directed covers and paracompact spaces*, 649
Mancuso, Vincent J. *n-ANR's for certain normal spaces*, 629
Martin, G. E. *On arcs in a finite projective plane*, 376
Masterson, J. J. *See* Luxemburg and Masterson
McCord, Michael C. *Embedding $\mathcal{P}$-like compacta in manifolds*, 321
McEliece, Robert J. *A generalization of difference sets*, 206
McLaughlin, T. G. *Splitting and decomposition by regressive sets, II*, 291
McQuillan, Donald L. *A note on Weierstrass points*, 268
Meeker, L. D. *Some generalized Hardy spaces*, 621
Mesner, D. M. *See* Watkins and Mesner
Mesner, Dale M. *Sets of disjoint lines in* PG(3, q), 273
Monroe, Itrel. *On the generalized Cauchy equation*, 1314
Moser, W. O. J. *The number of very reduced $4 \times n$ Latin rectangles*, 1011
Mullin, R. C. *On the enumeration of tree-rooted maps*, 174

Nelson, Evelyn. *Finiteness of semigroups of operators in universal algebra*, 764
Nelson, R. *Pseudovaluations of polynomials*, 1293
Neumann, B. H. *Some remarks on semigroup presentations*, 1018

Oddson, J. K. *Phragmèn–Lindelöf and comparison theorems for elliptic–parabolic differential equations*, 864
Ogawa, Hajimu. *Lower bounds for solutions of parabolic differential inequalities*, 667
Oppelt, John A. *Mixed Abelian groups*, 1259

Parker, E. T. *See* Appel and Parker
Pearl, Martin H. *A decomposition theorem for matrices*, 344
Pedoe, Daniel. *On a geometrical theorem in exterior algebra*, 1187
Peleg, Bezalel. *Equilibrium points for open acyclic relations*, 366
Plummer, Michael D. *See* Harary and Plummer
Putz, H. *Triangulation of fibre bundles*, 499

Rigby, J. F. *Collineations, correlations, polarities, and conics*, 1027
Rockafellar, R. T. *Conjugates and Legendre transforms of convex functions*, 200
Ruckle, William. *Symmetric coordinate spaces and symmetric bases*, 828

Sankoff, D. and Dawson, D. A. *A packing problem for measurable sets*, 749
Saxena, R. B. *Expansion of continuous differentiable functions in Fourier Legendre series*, 823
Scherk, Peter. *On differentiable arcs and curves, VI: Singular osculating spaces of curves of order $n + 1$ in projective n-space*, 1042
Schoenberg, I. J. and Zaremba, S. K. *On Cauchy's lemma concerning convex polygons*, 1062
Schuster, Seymour. *Axes of points of certain linear systems of polarities*, 1072
Seidel, J. J. *See* Goethals and Seidel
Sharma, A. *Interpolation by polynomials in z and z^{-1} in the roots of unity*, 16
Sheehan, J. *On Pólya's theorem*, 792
Shephard, G. C. *Polytopes with centrally symmetric faces*, 1206
——— *An elementary proof of Gram's theorem for convex polytopes*, 1214
Sherk, F. A. *Finite incidence structures with orthogonality*, 1078
Sion, M. and Zelmer, G. *On quasi-metrizability*, 1243
Sonner, Johann. *Lifting inductive and projective limits*, 1329
Stewart, B. M. *Supermagic complete graphs*, 427
Synge, J. L. *Two isomorphs of the four-colour problem*, 1084
Szász, Paul. *On the pseudo-euclidean geometry due to G. Hessenberg*, 1218

Tewari, Krishna. *Complexes over a complete algebra of quotients*, 40
Tutte, W. T. *Antisymmetrical digraphs*, 1101

van Rooij, A. C. M. *See* Gulick, Liu, and van Rooij

Warne, R. J. *Extensions of I-bisimple semigroups*, 419
Watkins, M. E. and Mesner, D. M. *Cycles and connectivity in graphs*, 1319
Wehrfritz, B. A. F. *A note on d-groups*, 410
Williams, Kenneth S. *Pairs of consecutive residues of polynomials*, 655
Wong, James S. W. *Common fixed points of commuting monotone mappings*, 617
Wunderlich, M. C. *See* Buschman and Wunderlich

Yaglom, I. M. *Geometric models of certain genetic processes*, 1233
Yano, Kentaro. *Notes on hypersurfaces in a Riemannian manifold*, 439

Zame, Alan. *The distribution of sequences modulo* 1, 697
Zaremba, S. K. *See* Schoenberg and Zaremba
Zelmer, G. *See* Sion and Zelmer